

I claim:

1. A plumbing tool for use in a pipe having an inside wall and an open end, said pipe having upstream and downstream portions for fluid to flow therein, comprising:

an outer tube having a length, an exterior surface, a first end and a second end;

an inner water escape tube having a length, a first end and a second end, a first opening defined in said first end and a second opening defined in said second end, said inner water escape tube having a longer length than the length of said outer tube, said inner water escape tube positioned within said outer tube and defining an air channel therebetween;

an expandable balloon-like member disposed around said exterior surface of said outer tube at said first end of said outer tube, said balloon-like member having a first end and a second end, said first and second ends being adhered to said outer tube and leaving an expandable portion between said first and second ends of said balloon-like member that is not adhered to said outer tube;

at least one aperture defined in said first end of said outer tube forming an opening between said air channel and said expandable portion of said balloon-like member;

said inner water escape tube being sealably engaged to said first end of said outer tube at said first end of said outer tube;

air supply means for forcing air into said air channel such that air passing through said air channel enters through said aperture in said outer tube at the end of said outer tube into said balloon-like member, causing said balloon-like member to inflate when said balloon-like member located at said first end of said outer tube is positioned within a pipe at a selected location to block fluid flow downstream; and

means for said inner water escape tube to exit from said air supplying means for allowing escape of fluid from said upstream portion of said pipe through said inner water escape tube when said balloon-like member is inflated while blocking fluid passage in said downstream portion of said pipe.

2. The tool of Claim 1 wherein:

said air supply means includes a cylinder, said cylinder having a first end and a second end, an interior portion and an exterior surface, said cylinder having a movable piston disposed in said interior portion, said piston being movable in a forward direction and a rearward direction; and

said second end of said outer tube is attached to said cylinder in an airtight relationship;

said inner water escape tube passes out said air supply means in an airtight fashion;

means to move said piston in a forward and rearward direction such that forward movement of said piston forces air through said air channel and said aperture(s) at said first end of said outer tube for inflating said balloon-like member, and rearward movement of said piston, when desired, causes retraction of air from said air channel and said aperture(s) at said first end of said outer tube for deflating said balloon-like member.

3. The tool of Claim 2 wherein said cylinder further includes:

a first cylinder cap engaged at said first end of said cylinder; and

a second cylinder cap engaged to said second end of said cylinder wherein said piston can be moved with an airtight contact in said cylinder to force air through said air channel.

4. The tool of Claim 3 wherein said first cylinder cap further includes:

an air chamber defined between said piston and said air channel within said second end of said outer tube;

a piston shaft having a first and second end, said first end attached to said piston with said second end of said piston shaft passing through a shaft opening defined in said second cylinder cap; and

a movable handle disposed on the second end of said piston shaft for movement of said piston in a forward direction within said cylinder for forcing from said air chamber to said air channel and for movement of said piston in a rearward direction within said cylinder body for retracting air in said air chamber and air channel, for inflation and deflation, respectively, of said balloon-like member.

5. The tool of Claim 4 wherein said first cylinder cap further includes:

an aperture defined therein for the passage therethrough of said second end of said inner water escape tube in an airtight relationship for the drainage of water from said first opening of said inner water escape tube at its first end upstream of said balloon-like member to said second opening of said inner water escape tube at its second end at a location beyond said exterior of said cylinder.

6. The tool of Claim 5 further including:

threads disposed around said shaft opening in said second cylinder cap;
and

mating threads disposed on said piston shaft at its second end for forward and rearward movement of said piston by the manual rotation in a desired direction of said movable handle.

7. The tool of Claim 6 further including a removable cap disposed at the second end of said inner water escape tube over said second opening of said inner water escape tube.

8. The tool of Claim 7 wherein said outer tube is made of a flexible, heat-resistant material.

9. A method of temporarily blocking fluid flow within a pipe, comprising the steps of:

providing a tube having a first end and a second end;

inserting said first end of said tube in said pipe, said tube having an inflatable balloon structure at said first end thereof;

providing means to inflate and deflate said inflatable balloon structure, said inflating/deflating means disposed at said second end of said tube;

inflating said balloon structure inside said pipe;

blocking fluid flow in said pipe by said inflated balloon;

deflating said balloon structure; and

removing said tube from said pipe.

10. The method of Claim 9 further including the steps of:

providing a water bypass disposed within said tube in communication with fluid flow in said pipe; and

directing any fluid flow blocked by said inflated balloon structure through said water bypass to the exterior of said pipe.